fathoms, they gave, broadly, a uniform error of 1°·4 F. in excess, and that this correction might be applied proportionally to the depth at which the observation is taken, *i. e.*, 0°·7 F. for every 100 fathoms. This may probably hold as a rough rule for ordinary instruments, where absolute accuracy is not required.

On reconsidering this matter since our return home, a doubt has arisen whether we were justified in applying to the minimum side of the thermometer these corrections on the scale prepared by Captain Davis, and a new set of experiments has been commenced at pressures up to three to four tons on the square inch.

This last class of errors may seem very trivial, but there are cases, where questions of special delicacy arise, in which they may assume considerable importance. Throughout the ocean generally, at all events between the two polar circles, the temperature of the ocean may be said as a rule to sink from the surface to the bottom. There are many places, however, where this gradual sinking appears to be arrested at a certain point, from which the temperature remains uniform to the bottom. Frequently the temperature as recorded by the thermometer reaches a minimum at a depth of 1800 or 2000 fathoms: this is the case, for example, throughout the greater part of the Atlantic, and there is little doubt that the result is in the main correct, and can be accounted for by the action of a very simple law; but if the temperature remained *exactly* the same, the application of this ultimate correction to depths from 2000 down to 3000 fathoms would cause the thermometer to appear to rise sensibly. This certainly is not generally the case, or it would have come out in the large number of observations which have been made under circumstances where such a result might have been expected; and therefore I think we must conclude that in all the great ocean basins, from some cause or other, there is a very slight fall of temperature to the very bottom.